SWISS TIMING

User's Manual

SATURN

Badminton Basket Hockey Tennis Volley Handball

3400.500.02

Version 5.06

Edition November 2007

CAUTION

- **Protect the equipment against splashing, rain and excessive sun rays.**
- **Never use the device if it is damaged or insecure.**
- **Verify the selection of the power distribution.**
- **Do not open the case; there is nothing that needs servicing inside it. Nevertheless, if the case must be opened, you must call for some qualified personnel. The power supply cable must be disconnected before opening the case.**
- **The information contained within this document may be modified without warning.**
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1 INTRODUCTION

Swiss Timing Ltd offers a large selection of scoreboards of the *SATURN* range, which are suitable for all omni sports halls. The selection of the scoreboard can be done from one ergonomic console. The keyboard of the console has partially alphanumeric and functional keys. This makes the use for the operator comfortable. This console can also be used with the *VEGA* and *ORION* display boards.

This manual is valid for the version of the software mentioned on the title page. When you switch on, you will see the version on the display.

Some peripheral devices complete the equipment of the *SATURN* scoreboard, for example:

- Counter for the ball possession time (Shot Clock) for Basketball.
- Goal lamp for hockey.
- External Start / Stop for all sports with game time.

1.1 Installation

See installation manual 3400.504.

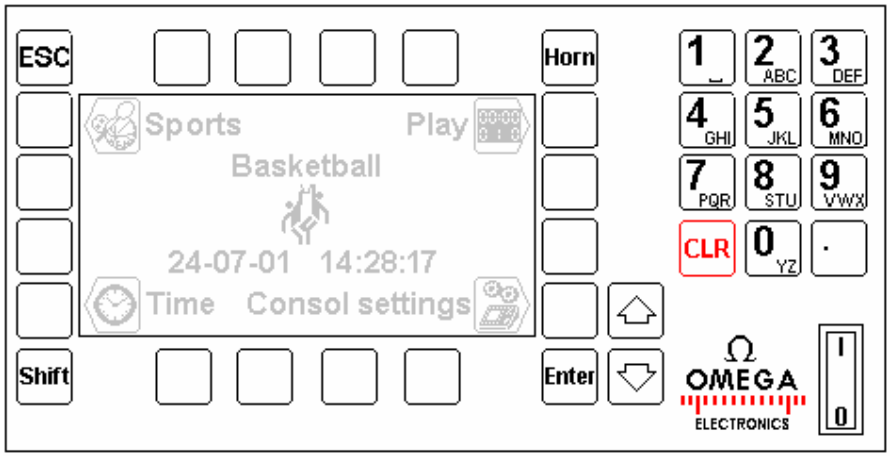
1.2 Set-up

Before you connect the scoreboard and the console to the power supply, please ensure the power and the information cables are installed as per installation manual. Switch on the console at the rear back.

1.3 Keyboard

The keyboard consists of three types of keys:

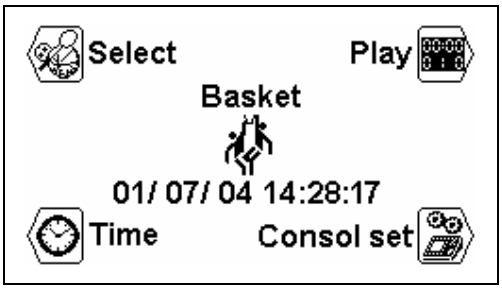
- The alphanumeric keys.
- The keys with one function.
- The keys with more functions.



ESC	Escapes the function or the menu without validating the possible modifications (ESCAPE)
Shift	Chooses the second function on the key (Shift + key)
⇧	Moves the cursor up
⇩	Moves the cursor down
0 YZ - 9 VWX	Alphanumeric keyboard
Horn	Manual horn
Enter	Confirms the application or the action
	Function key relating to the image shown on its side on the screen
CLR	Clears the current operation or clears the whole scoreboard when in the main menu
I 0	Switch Start/Stop 0 = Stop I = Start

2 MAIN MENU

When you switch on, the main menu appears. It shows the selected sport, the time and date, as well as the main menus:



Console set	refer to chapter: 3
Time	refer to chapter: 4
Select	refer to chapter: 5
Play	refer to chapter: 6

To choose one of the menus, press one of the keys with the function image.

[Console set] Parameterization of the console

In this menu you can introduce the different settings of the console.

[Time] Day time

In this menu you can set date and day time.

[Select] Games parameters

In this menu you can select and save the different sport settings.

[Play] Match

In this menu you can start a game.

3 [Console set] Parameterization of the console

In this menu you can configure the different settings of the console. The top of the screen shows the console's software version.

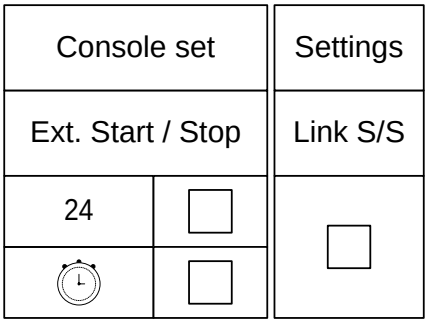
3.1 Test

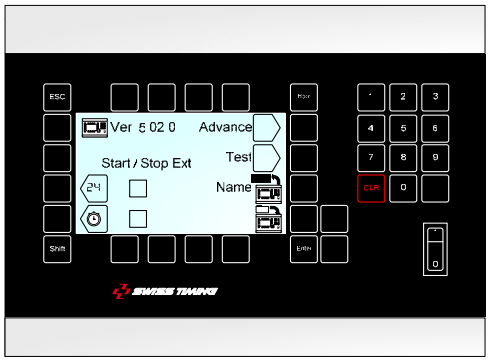
This function sends a test program to the scoreboard and appears on the display of the console. Press the ESC key to exit the program.

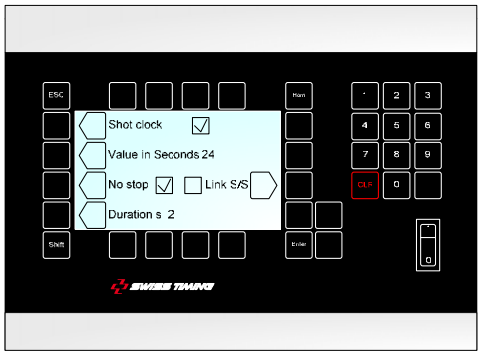
3.2 Ext Start/Stop – External Start/Stop with 3 point socket

Note: chapters 3.2.1 to 3.2.6 only concern the consoles programmed with version 5.02 upwards

3.2.1 Start/Stop of match time with Saturn console

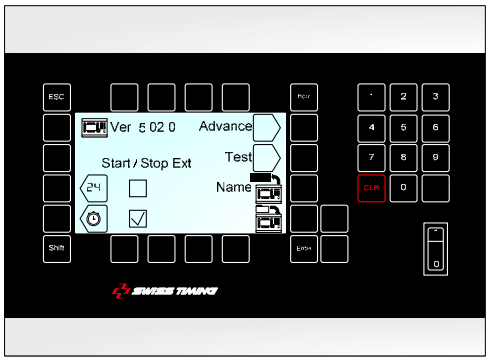


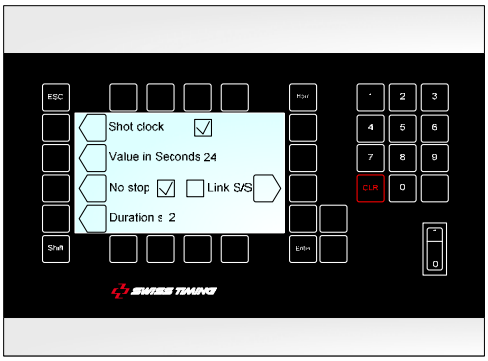


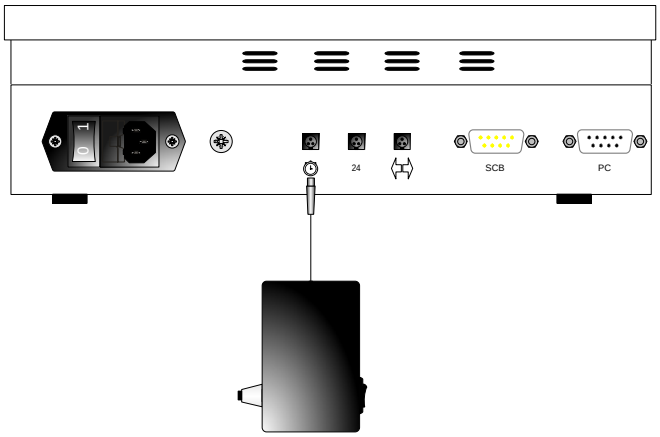


3.2.2 Start/Stop of match time with external Start/Stop command

Console set		Settings
Ext. Start / Stop		Link S/S
24	☐	☐
🕒	☑	

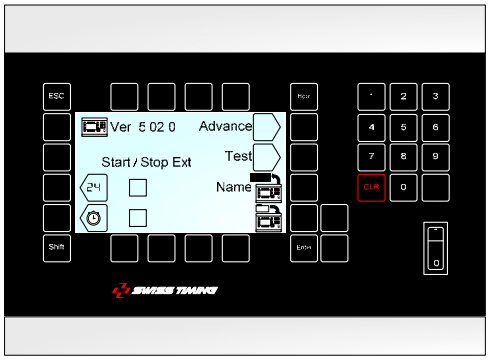


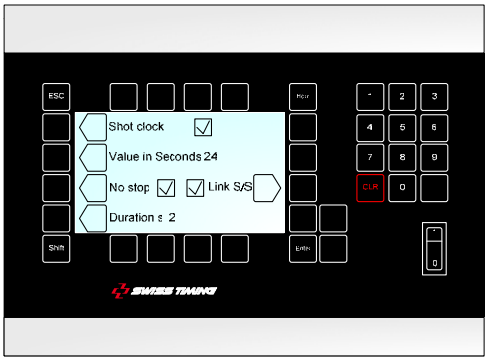


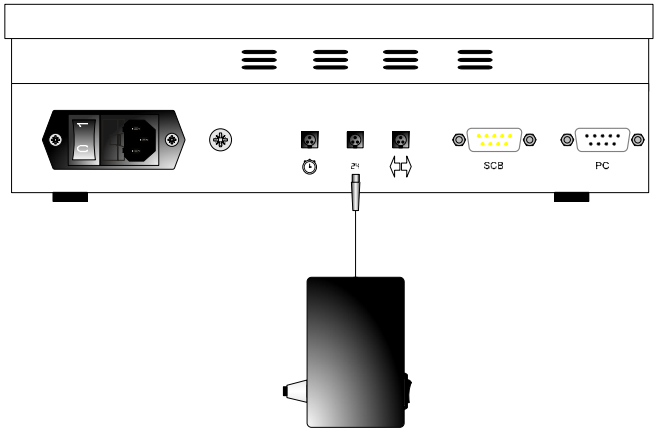


3.2.3 *Start/Stop of match time with Saturn console and Shot clock 24s reset with external Start/Stop command*

Console set	Settings
Ext. Start / Stop	Link S/S
24 ☐	☑
☐	

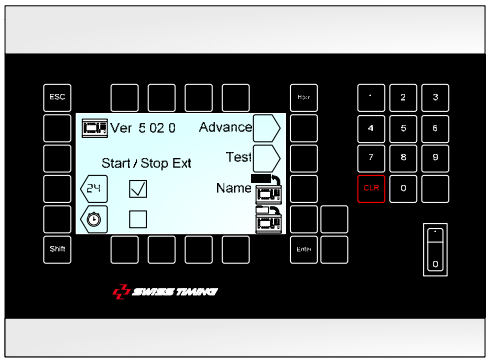


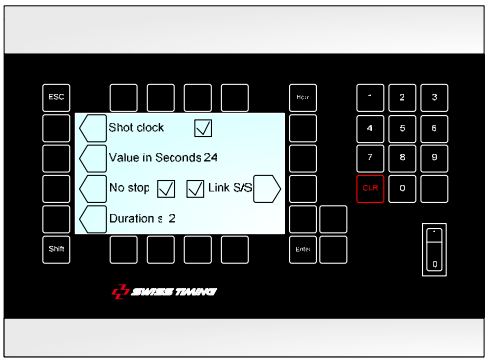


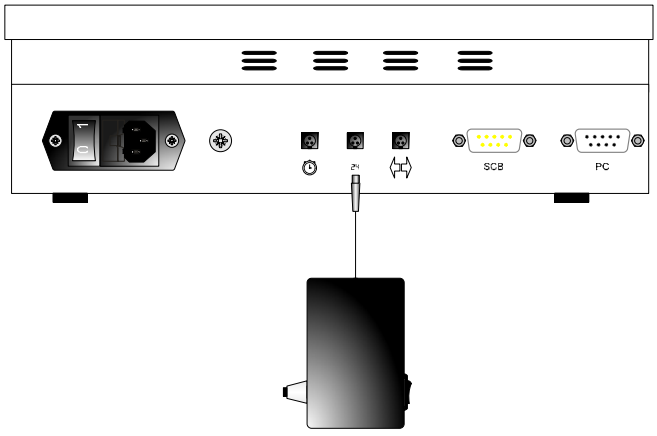


3.2.4 *Start/Stop of match time and Shot clock 24s reset with external Start/Stop command*

Console set		Settings
Ext. Start / Stop		Link S/S
24	☑	☑
🕒	☐	

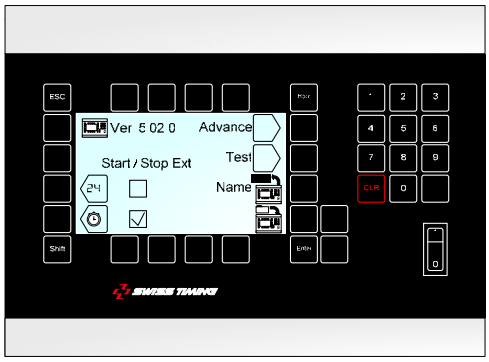


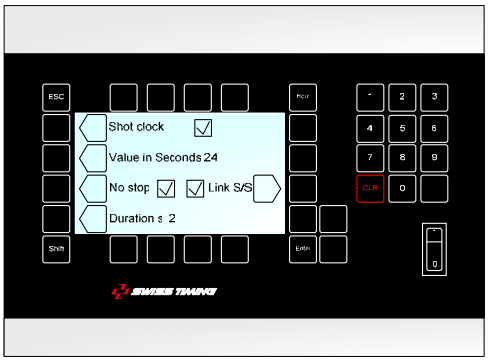


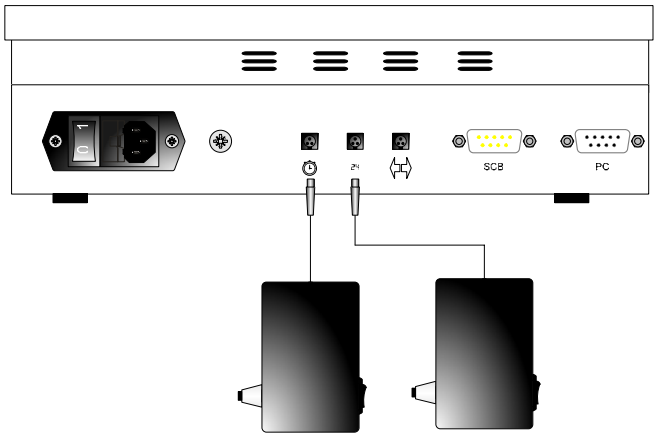


3.2.5 *Start/Stop of match time with external Start/Stop command and Shot clock 24s reset with a second external Start/Stop command*

Console set		Settings
Ext. Start / Stop		Link S/S
24	☐	☑
⏱	☑	

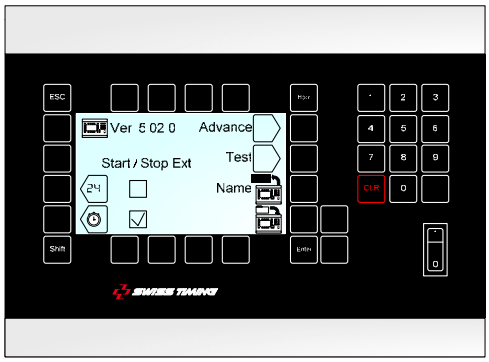


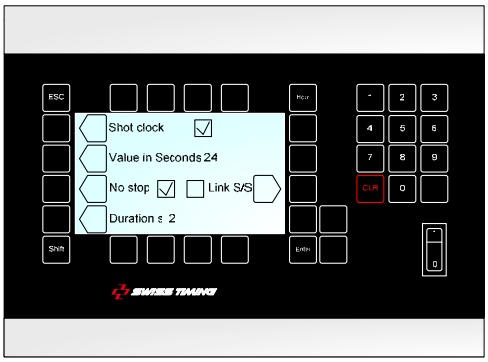


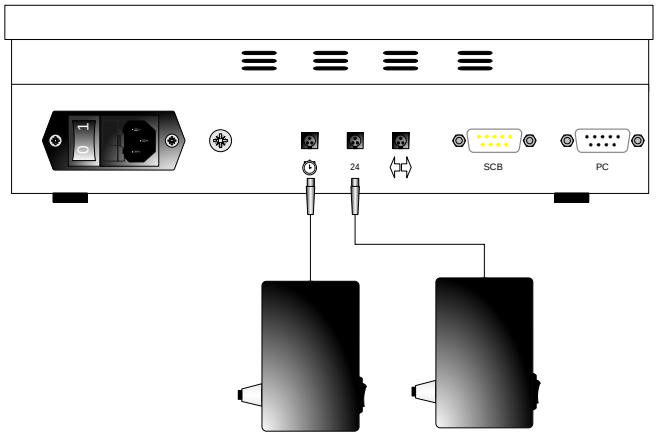


3.2.6 *Start/Stop of game time with external Start/Stop command and Start/Stop and Shot clock 24s reset with a second external Start/Stop command*

Console set		Settings
Ext. Start / Stop		Link S/S
24	☐	☐
🕒	☑	







3.2.7 Ext Start/Stop – External Start/Stop with jack socket

You have the possibility to connect an external Start/Stop switch to the Jack plug socket situated at the back of the console. Press the function key depending on the application:

- ☑ external Start/Stop switched on
- ☐ external Start/Stop switched off (in this mode, a possible external Start/Stop will only drive the ball possession time (shot clock).

3.3 Advance –Scoreboard configuration

This menu allows to configure the message sent to the board according to the model and use.

3.3.1 Scoreboard with indication of alternate possession

If you have a board with indication of the possession ("<" and ">" sign), you must select the function «Possession» by ticking the box ☑ in order to activate a proper display.

Possession ☐

Possession ☑

If the “Possession” box is ticked in “Console set” “Advance”, the extra times are indicated with an “E” (Extra period) on the scoreboard (it remains a number on the console’s display); this has been done to correspond to the Basketball’s rules.

If the “Possession” box is not ticked in “Console set” “Advance”, the extra times are indicated with a period number (depending on the number of authorized periods); for example 5 and 6 in Basketball.

3.3.2 Orion display (Tennis)

If you possess a display of the *ORION* line, you must select the function “Tennis ORION” by ticking the box ☑ in order to activate a proper display of the day time, match duration and end.
If you possess a display of the *SATURN* range and you are doing a tennis game, you do not have to select this function.

3.3.3 Olympic version Saturn display (OG)

If you possess an Olympic version of the *SATURN* display (OG = Olympics Games), you must select the function «Olympics» by ticking the box ☑ in order to activate a proper display.

Olympics ☐

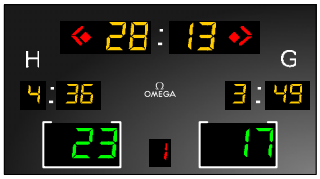
Olympics ☑

3.3.4 Outside ice rink Saturn display

If you possess a display of the *SATURN* line and use it for an outside ice rink configuration, you must select the function "Hockey Outdoor" by ticking the box ☑ in order to activate the function for the change of side in the middle of the third period.

3.3.5 Saturn 604 display board

Tick the 604 box in the Advance menu of the console set for using the console with a Saturn 604 display board (one penalty per team).



When the 604 box is ticked, the Possession and Olympics boxes are automatically ticked.

3.3.6 Bluetooth configuration

The "BT" key allows you to select the Bluetooth scoreboards who have to be wireless connected to this console. Do not use this function if your console is not equipped with the internal bi-directional Bluetooth option.
If you want to change the Bluetooth scoreboards connected to this console:

- Power ON all the requested scoreboards.
- On the console, press the "Yes" key.

NEVER SWITCH OFF THE CONSOLE DURING THE CONFIGURATION !

- Wait until question is displayed.
- The name of the scoreboard is display. Answer "Yes" if the founded Scoreboard have to be connected on the console, answer "No" to disconnect this scoreboard or "V" to not change the configuration of this scoreboard.
- Repeat the precedent point for each scoreboard founded.
- Then the software automatically go back in the "Advance" menu. Press twice the "ESC" key to go back in the main menu.
- The day time must be displayed on the scoreboard (if not, wait about a minute for Bluetooth connection).

Note: only Bluetooth scoreboard with the **same password** can be configured.

3.4 Name – Teams names, Players numbers, Players names

This menu allows the management of the teams names as well as the players names and numbers.

3.4.1 Sending the teams names

If the "Send Team" box is ticked (☑), the teams names will be sent when entering the match (the message "Wait for data transmission" will appear on the screen during a few seconds).
Tick this box only if you have the optional module "Team Name" [3400.740].

3.4.2 Sending the players names

If the "Send Player" box is ticked (☑), the players names will be sent when entering the match (the message "Wait for data transmission" will appear on the screen during a few seconds).
Tick this box only if you have the optional modules "Players Names".

3.4.3 Instant sending of the names

Press key to instantly send the teams and players names to the board. During the sending, the text "Sending…" is displayed on the bottom of the screen. Press the ESC key to Stop the transmission.

3.4.4 Introduction of players names and numbers

Using the "Modify Visitors" and "Modify Home" keys, you can introduce the team name as well as players names and numbers, for the visitors and local team.

In this screen:

- The "Team" key allows the edition of the team's name*.
- The ⇧ and ⇩ keys allow to choose one of the players to be modified (N = 1 to 16).
- When you first press on the "N Num Name" key, you can modify the player's number.
- After confirmation of the player's number, if you press a second time on the "N Num Name" key, you will be able to edit the player's name. After validation, the key automatically goes to the next player (N = 1 to 16).

***** : The ⇧ and ⇩ keys allow to move the cursor.
The CLR key allow to erase the letter preceding the cursor.
The 0 yz and 9 vwxz keys allow to introduce a letter or a number, the same way as for a mobile phone (by pressing successively on the same key).
The Enter key allows to validate the modifications.
The ESC key allows to cancel the modifications.

It is possible to have up to 16 players per team; on boards 909, 919 and 929, only the 12 first players are displayed. By default, these players numbers go from 4 to 15 (Basketball).

a. Saturn 909 → Personal faults
b. Saturn 919 → Personal faults, scored goals, players on the field.
c. Saturn 929 → Personal faults, scored goals, players numbers, players on the field.

3.5 Update the software

The *SATURN* line allows the download of a new software version in case there are rule changes in the different sports. Follow the procedure displayed on the screen.

Operating of the console:

- Connect the console to the serial port RS232 of the computer (Cable Sub-D 9 poles male-female pin to pin [OMEGA article No. 9051.1307]).
- Switch on the console.
- Select menu [Console set].
- Press function key . The screen shows the Swiss Timing logo, as well as the actual software version installed.
- Press function key and follow the instructions:

```
Firmware upload
Actual version :   x.xx
1)Connect serial cable
2)Press Program Flash on PC
3)When completed, turn power OFF and ON
```

Operating of the computer:

- Load the FlashSimple program (available on our internet site) and start.
- Press on the "*Flash*" menu then "*Setting*" and introduce following values (only for the first use):
    - *H8S/2134F* for Device name
    - *Direct Connection* for Interface name
    - Port com: X (according to your computer's serial port)
    - Baud rate 9600
    - USER mode

  Press OK to confirm the parameters**.**

- Press on the "*Browse*" button and download the software (Ex. OMEGA455.fpr)
- Press on the "*FLASH program*" button and wait for the loading of the software to be finished; **the message "The device was successfully programmed" must appear**. This operation lasts for about 4 minutes.
- When loading is finished, switch the console off, then turn it on again, and check the update version (Ex. Ver 4.55).
- Press the Select button.
- Press on "All def. & Save" button and validate by pressing Yes in order to initialize the console with the factory values.

This last operation will erase your specific parameters, but it is essential to keep the new software version in correct working order.

4 [Time] Day time

This menu allows you to introduce the date and day time. Only the day time can be transmitted to a *SATURN* scoreboard. Select the needed function key:

For the selection of the date

For the selection of the hours

For the selection of the month

For the selection of the minutes

For the selection of the year

To modify the value, use the alphanumeric keyboard or the keys ⇧ (plus 1) and ⇩ (minus 1), then press the Enter key to confirm the entry. To go back to the initial value, press on the ESC key instead of the Enter key. Repeat this procedure until all the values match your requirements.

The synchronization of the clock must be done at 0 second by pressing the Enter key in the selection menu.

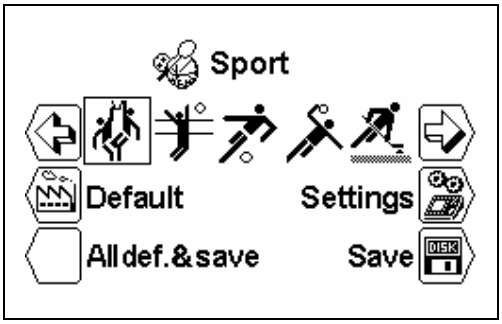
The display of the day time is automatically done when in the main menu of the console.

- An internal battery allows to keep the exact time and date during 30 days after the last switch off.
- The parameters of the console and sports always remain in the memory (not limited in time).

5 [Select] Games parameters

The selection and back up of the various games parameters (Duration of the period, horn, direction of clock counting) is done in this menu.

Choose the required sport with the ◄ and ► keys. The scrolling is bigger than the size of the display. Therefore, if you press on the ◄ key from the position Basket, other sports will also be displayed.



5.1 [Settings] Choose the settings for a sport

When you have selected the desired sport, press on the key [Settings] to change the parameters. Use the ▲ and ▼ keys to see all the parameters.

- According to the selected sport, some parameters cannot be programmed.
- Each sport memorizes its specific parameters.

[Number period]
Number of match period. The actual number of periods is displayed on the right followed by the number of extra periods [EP for Extra Period].

[Setting period & Pause]
Modification of the game times of the several periods, the number of extra periods and duration of times out.

- [Select Period] Use the keys ▲ (plus 1) and ▼ (minus 1) to read the values of the several periods.
- [Min. xx] Value of the several periods in minutes.
- [Sec. xx] Value of the several periods in seconds.
- [Extra Period x] Selection of the number of extra periods.
- [Pause] Introduction of the value of the two possible times out, following the same procedure as for the duration of the periods.
  - [Select pause x] Selection of the time out
  - [Min. xx] Setting in minutes of the break duration
  - [Sec. xx] Setting in seconds of the break duration

[Count up]
Changes the way of counting from ascending [Count up] into descending [Count down].

[Visual 1/10]
The tenth of a second is displayed during the last minute of the descending mode.

[Key +2 +3] activated ☑, not activated ☐
Displays the keys +2 and +3 in the menu [Play]. These keys allow to increase the score of 2 or 3 points in one function only.

[Service] activated ☑, not activated ☐
Activates the service keys in the menu [Play].

[Shot clock]
Selection menu of the ball possession timers' parameters.

- ☐ [Shot clock] ☑ Possession timers connected.
  ☐ Possession timers not connected.
- ☐ [Value in Seconds] Duration of the possession in seconds.
- ☐ [No stop] ☑ Does not stop the playtime when the possession time reaches 0.
  ☐ Automatically stops the game time when the possession time reaches 0.
- ☐ [Duration s. x] Horn duration for the possession timers (introduce 0 if you do not wish a horn at the end of possession time).
- ☐ [Link S/S] Links the start of the shot clock with the start of the match time.

[Setup Time out]
Selection menu of the time outs parameters.

- ☐ [Time Out on Clock] ☑ The time out is displayed instead of the game time.
  ☐ The time out is displayed on the extra module.
- ☐ [Number Time out] Number of authorized times out (per period or per match).
- ☐ [Sec. Time out] Duration of the time out in seconds.
- ☐ [T.O.T.] Duration of the technical time out in seconds.

[Team Fouls]
Gives the quantity of the maximum authorized fouls per team for a period or for the match. An erasing message comes on before the start of the new period.

[Ad. Fouls/Score]
Activates the function of the personal fouls, penalties and goals scored by player.

- ☐ [Fouls Score]
  - ☐ [Fouls] If the box is ticked (☑), the player's number is requested at the introduction of a foul. Depending on the sport, you must activate this box if you have either a 909, 919 or 929 board.
  - ☐ [Score] If the box is ticked (☑), the player's number is requested at the introduction of a goal. Depending on the sport, you must activate this box if you have either a 919 or 929 board.
  - ☐ [Player Fouls x] Maximum quantity of fouls per player.

[Fouls time] If the box is ticked (☑), it is possible to give the expulsion times. Depending on the sport, tick this box if you have a 908 (or number above) board.
[Select expulsion] Selection of the expulsion (1 to 6)
Use the keys (plus 1) and (minus 1) to read the values of each expulsion.
Note:
The duration of expulsion 6 will not be numerically displayed on the board but will be indicated by a red luminous dot (usually used in ice hockey for the 10 minutes expulsion).
[Minutes xx] Minutes value of the expulsion duration.
[Seconds xx] Seconds value of the expulsion duration.

[Clear All] Clears [Fouls Score] and [Fouls time].

[Setting Horn]
Selection and duration of the horn at the end of a period, pause and timeout.

[Period: x] Duration in seconds of the horn (on the board) at the end of each period (introduce 0 if no horn is wished at the end of each period).

[10 Sec] If the box is ticked (☑),the horn will be activated for one second, 10 second before the end of each timeout.

[Pause & Timeout: x] Duration in seconds of the horn (on the board) at the end of each pause and each timeout.

[Pause] If the box is ticked (☑), the horn will be activated at the end of each pause.

[Timeout] If the box is ticked (☑),the horn will be activated at the end of each timeout.

[Day Game Time]
Display of game time and day time. This function is only available for sports which do not have a game time and only for certain boards (908, *ORION*)

[Day time] If the box is ticked (☑), the day time is displayed on the board.

[Game time] If the box is ticked (☑), the game time is displayed on the board.

5.2 [Save] Save the sport settings

The last modifications of parameters in the several sports are saved in the console. A confirmation message is displayed before the backup.

5.3 [Standard] Change the standard settings for a sport

Downloads the standard settings for the selected sport. This operation does not save those values in the memory. If you wish to use these parameters for the next competitions, you must save the values as described in the above chapter.

5.4 [All stand. & save] Reset the standard settings for all sports

Downloads all the parameters of each sport and saves them in the memory. This function downloads the standard settings of Swiss Timing (See chapter Standard Settings).
This function must be done after a firmware upload.

6 [Play] Match

This menu allows you to start a game. You must first select the sport you want in the menu [Select].
Arrange the keys and on the sport you want and press Enter. The Saturn software is now activated in the main menu and the image of the selected sport is displayed in the middle of the screen.
Press on key [Play] to start the game. The software first asks you if you wish to continue the previous game or start a new one:

Download previous game ?

Answers NO to start a new game
Yes to carry on the previous game

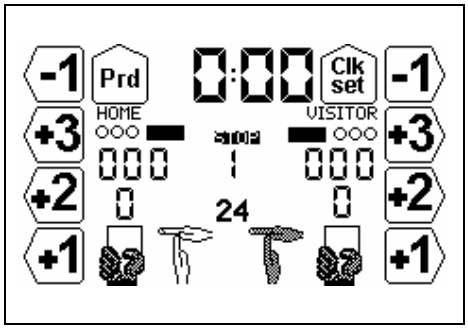
When the switch start/stop is on start:

Move switch in off position !

To continue put the switch start/stop on STOP.

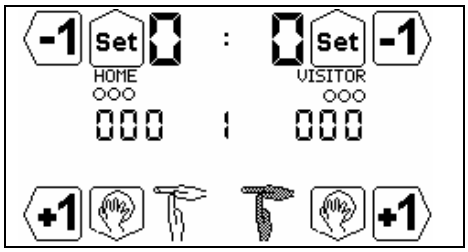
If you have chosen a sport **with a Game Time** (Basketball, Handball, Hockey, etc.) and depending on the chosen settings, the console shows the values of the first period.

See chapter: 6.1 Sports with game time



If you have chosen a sport **without Game Time** (Volleyball, Table-Tennis, etc.) and depending on the chosen settings, the console shows the values of the first period.

See chapter: 6.2 Sports without Game time



6.1 Sports with game time

The display is split in three parts:

A. The general display with regulation of Game Time:

Display	*Description*
0:00	Game Time
stop	Game Time is stopped
1	Current period
24	Time of ball possession (Shot Clock)
Prd	Modify the period
Clk set	Modifying the Game Time during the game

B. Display of the home team (HOME or a name introduced in the console's settings).
C. Display of the visitors team (VISITOR or a name introduced in the console's settings).

Home	*Visitor*	*Description*	*Home*	*Visitor*	*Description*
ooo		Display Times Outs	+3	+3	Game result +3
000		Game results	+2	+2	Game result +2
0		Team penalties	+1	+1	Game result +1
		Personal penalty			Temporary exclusion
		Time Outs			Alternate Possession

Depending on the sport and configuration, only some keys appear.

6.1.1 Start the period

To start the period, put the START/STOP switch on START. The current time starts to count up or down depending on the game settings.

- In START position, the display shows GO
  Turn the switch to STOP, to stop the game time.
- In STOP position, the display shows [redacted].

6.1.2 Modification of the scores

With the help of the function keys you can change the scores.

- Press one of the keys +1 +2 +3 to increase the score. The keys +2 and +3 appear not only when the function is active.
- Press the key Shift then -1 (it is the key +1 with functionality changed by Shift), to reduce the score.
- It is also possible to increase the score by pressing Shift than +2 or +3.

If [Ad. Fouls/Score] [Score] is ticked in [Settings] Choose the settings for a sport, the number of the player who scored is requested. The players on the field are indicated by a black shirt and the other players are indicated by a white one. If a goal should not be given to a specific player, validate with the CLR key.

6.1.3 Introduction of a fault

As soon as a player receives a penalty, it is possible to introduce all the team penalties, as well as the amount of personal penalties (depending on the settings selection).

- Press the key (Home or Visitor), to increase the team penalties.
- Press the key Shift then the function key , to deduct one penalty.

Depending on the settings selection, the player's number is requested:

- Press on the corresponding player's number in order to give it to a player.
- Press the key CLR to give it to the whole team without giving it to a specific player (for example if the penalty is committed by the coach).
- Press the key ESC to cancel the attribution of the penalty.

Note: when a player reaches the maximum authorized amount of penalties, he is automatically removed from the list of the players on the field.

6.1.4 Introduction of a penalty

In certain sports, when a player commits a fault, it is possible to exclude him for a certain time.

- Press the function key (Home or Visitor) to give a temporary expulsion to a player.
- Press one of the keys «F1» to «F6» to choose the duration of the temporary expulsion; in hockey, you can add a second penalty to the same player by pressing a 2nd key (for example 2:00 + 2:00). Then:
  - If the expulsion should not be given to a specific player (as per board's settings), or if we wish to start immediately the penalty whilst the player's number is still unknown, validate by pressing the key Enter
    or,
  - Press the key «Player» to choose the number of the player to whom the exclusion is given
    or,
  - Press the key «On-fly» to add a penalty time to a player who already has a penalty (for example 2:00 + 2:00 for handball), then choose on which existing penalty this time should be added
    or,
  - Press the key ESC to cancel the attribution of the exclusion.

Note: the player is automatically removed from the list of the players on the field.

- Press the key Shift then the function key (Home or Visitor) to cancel an exclusion. In the next screen, press on the key(s) of the expulsion(s) to cancel, then validate with Enter or cancel the cancellation with the ESC key. In that screen, it is also possible to modify the number of a player that has got a penalty: press the nT key ("nT" appears on a black background) then press the key corresponding to the penalty to which the player's number must be modified ("T1" to "T5"), finally press on the key corresponding to the number of the player that has a penalty.

6.1.5 Introduction of a Time Out

In the time out settings [Time out] of [Settings] Choose the settings for a sport, you can choose your parameters.

- To display a time out during a game, the START/STOP switch must be on STOP; then press the function key (Home) or (Visitor). If there are separate panels for the display of the time outs, the game time will appear in the external zone.
- To cancel a wrong introduced time out, press the key Shift afterwards the key function (Home) or (Visitor).
- To display a technical time out during a game, press the function key T. The duration of the technical time out is displayed on the board instead of the game time. If you have a display board with separate displaying of the time out, the time will appear in the external area.

If the time out is not count down till the end and the teams restart their game, the time out will be deleted, as soon as the switch START/STOP is back on START and the game time continues.

6.1.6 Management of Shot clock

With the help of an external switch START/STOP & RESET you can operate the ball possession panels (Shot clock).

- Connect external switch to the back of the console.
- The RESET button allows to initialize the possession time. As long as the RESET button is pressed, the shot clocks are erased.
- The function of the START/STOP switch changes according to the settings in [Consol set]:
    - If «Ext Start/Stop» is ticked (☑): the external switch commands the game and possession time.
    - If «Ext Start/Stop» is not ticked (☐): the external switch only commands the possession time (both the switch of the console and the external one must be on START for the possession time to be increased).

6.1.7 Modification of players on the field

On the *SATURN* 919 and 929 boards, an amber dash indicates the players on the field. To modify the players on the field:

- Press Shift then ⌂ to modify the composition of the local team.
- Press Shift then ⌄ to modify the composition of the visitors team.

The players on the field are indicated with black shirts, the other players with white shirts. Press the corresponding keys to modify the players on the field. In the middle of the screen, the numbers and amount of players on the field are indicated. From this screen, it is possible to:

- Go to the composition of the local team by pressing key ⌂.
- Go to the composition of the visitors team by pressing key ⌄.

Validate the changes by pressing key Enter or ESC.

Note: when a player reaches the maximum authorized amount of faults, he is automatically removed from the list of the players on the field.

6.1.8 Modification of the period

The period is not automatically increased at the end of a game in order to be able if needed, to modify the score or any other setting before starting the next period. To go to the next period or to modify its value:

- Press Prd to increase the period by 1.
- Press the key Shift then Prd to reduce the period by 1.

See also chapter 6.1.10 End of period

6.1.9 Modification of game time during a game

When the game time stopped, the key function Clk set becomes active. Now you can modify the current period and introduce a new time. Herewith you do not change the chosen settings for the period. Regarding to the sport, some of the following functions are not available:

- When you press the key Clk set, the correction menu appears for the game time
- Choose the key [Minutes], to modify the minutes.
  - Introduce the new values and validate with the key Enter.
  - Press ESC to go out without saving.
- Press the key [Seconds], to modify the seconds:
  - Introduce the new values and validate with the key Enter .
  - Press ESC, to go out without validating.
- Choose the key [1/10] to modify the tenth of a second:
  - Introduce the new values and validate with the key Enter .
  - Press ESC to go out without saving the new value.
- Press the key [Sec. 24] to modify the possession time:
  - Introduce the new values and validate with the key Enter .
  - Press ESC to go out without saving the new value.
- Press the key [HOME] to modify the expulsion time for the local team.
- Press the key [VISITORS] to modify the expulsion time for the visitors team.
- Press the key [Pause] to introduce a pause at any time of the match (see 6.1.11 Pause for more details).

To go back to the menu [Play]:

- Press the key Enter, to save modifications.
- Press the key ESC, to go out without validating and saving.

If the game time has been modified, a question

Apply the difference to all the timers ?

will ask if all the expulsions must be modified accordingly.

By pressing YES, all expulsion times and game time will be modified.

By pressing NO, the game time will be modified.

6.1.10 End of period

When the period finished, the following display appears:

`Move switch in off position !`

Turn the switch on to Stop.

If necessary, adjust score or other events that could have occurred.

Press the key Prd to go to the next period.
If some counters need to be reset to zero, choose:

[Reset Team Fouls only]	Sets the amount of team fouls back to 0.
[Reset Fouls & Time Out]	Sets the amount of team fouls and amount of Time Out used back to 0.
[Reset Time Out only]	Sets the amount of Time Out used back to 0 for each team.
[No reset]	Nothing is reset to 0.

You can then choose the following data:

NP = No Pause, by pressing this key, there will be no pause time displayed on the board, the next game period will be displayed automatically.
P1, P2, P3, by pressing of these keys, the pre-programmed pause time will be displayed on the board. When the pause time is over, it automatically goes onto the next game time. By pressing the ESC key, the pause time is stopped and the change on the next game time is done automatically.

6.1.11 Pause

When the game is stopped and at any time, it is possible to introduce a count down (or pause or time out) of a certain duration. This is very useful for example, to indicate the beginning of the match or the remaining warm-up time.

- Press the key Clk set then [Pause].
- Select the duration of the pause using [Minutes] and [Seconds].
- Validate the duration of the pause by pressing the key Enter. The duration of the pause is now displayed on the screen and on the board.
- At the end of the pause the display and the board show the game time again.
- Press ESC to cancel a pause in progress.

6.1.12 End of game

When the last period is finished, press on the key Prd ; a screen will ask you if you wish an extra period:

Extra period ?

Answers NO to end the play. The console will show GAME OVER and it will not be possible to start the game time again.
Yes to enter the first extra time.

When the console shows GAME OVER or at any other moment, press the ESC key to exit the game:

Would you exit the game ?

Answers NO to stay in the game
Yes to leave the game

To start a new game, it is essential to leave the current game first.

6.2 Sports without Game time

The display is split into three parts:

A. The display of both Game results:

Display	*Description*
0 : 0	Current scores in game/set
1	Current set

B. Display of the home team(HOME).
C. Display of the visitor team (VISITOR).

Home	*Guest*	*Description*	*Home*	*Guest*	*Description*
○○○		Display Time outs	-1	-1	Score (point) –1
000		Current score in game/set	+1	+1	Score (point) +1
		Advantage / Service	Set	Set	End of the Set
		Time out	GAME	GAME	End of the game

6.2.1 *Start of the game (Set)*

As soon as you chose [Play] key, the game starts.

6.2.2 *Modification of the scores*

With the help of the function keys, you can modify the scores:

- Press the key +1, to increase the score.
- Press the key -1, to deduct the score.

6.2.3 *Introduction of a Time out*

In the time out settings [Time out] of [Settings] Choose the settings for a sport, you can chose your parameters.

- To display a time out during a game, press the function key (Home) or (Visitor). If there are separate panels for the display of the time outs, the game time will appear in the external zone.
- To cancel a wrong introduced time out, press the key Shift after words the key function (Home) or (Visitor).
- To display a technical time out during a game, press the function key T. The duration of the technical time out is displayed on the board instead of the game time. If there are separate panels for the display of the time outs, the game time will appear in the external zone.

6.2.4 *Advantage / Service*

When you chose the key , you can display the service of each team. If you want to delete the service, press the key Shift and then the function key of each team.

6.2.5 *End of game*

When the game is over, press the key function GAME of the winning team.
To decrease the amount of games won, press the key Shift then GAME.

6.2.6 *End of set*

When the set is over, press the key function Set of the winning team. The following display appears:

Are you sure to change set ?

Answers NO to stay in the game.
Yes to start the next game.

To decrease the amount of sets won, press the key Shift then Set.

6.2.7 Tie-Break

In tennis, when the key TIE BREAK is displayed, the points are counted 0, 15, 30, 40, …
When the key TIE BREAK is displayed, the points are counted 0, 1, 2, 3, 4, 5, …

6.2.8 Modification of players on the field

On the *SATURN* 919 and 929 boards, an amber dash indicates the players on the field. To modify the players on the field:

- Press Shift then ⌂ to modify the composition of the local team.
- Press Shift then ⌄ to modify the composition of the visitors team.

The players on the field are indicated with black shirts, the other players with white shirts. Press the corresponding keys to modify the players on the field. In the middle of the screen, the numbers and amount of players on the field are indicated. From this screen, it is possible to:

- Go to the composition of the local team by pressing key ⌂.
- Go to the composition of the visitors team by pressing key ⌄.

Validate the changes by pressing key Enter or ESC.

Note: when a player reaches the maximum authorized amount of faults, he is automatically removed from the list of the players on the field.

6.2.9 Match duration

According to the settings and type of the display board, the match duration can be displayed on the board. The control of the match duration is done with the Start/Stop switch. The match duration is indicated in minutes on the display board, and in seconds on the screen.

6.2.10 GameOver

When the game is over, press on the function key GAME OVER. The counting of the match duration is stopped and it is not possible to modify the scores any more.

When the console shows GAME OVER or at any other time, press the key ESC to exit the game:

`Would you exit the game ?`

Answers NO to stay in the game.
Yes to leave the game.

To start a new game, it is essential to leave the current game first.

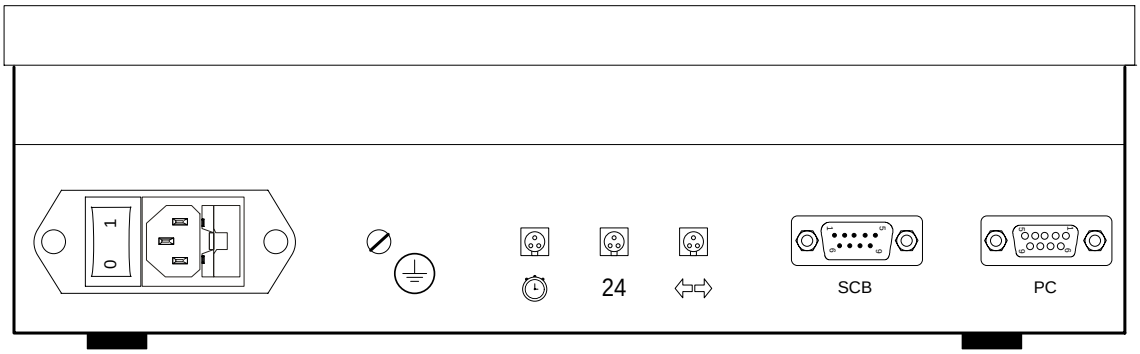
7 DEFAULT VALUES

Description		Authorized values	Basket	Volley	Football	Handball	Ice Hockey	Tennis	Custom
Number period		1 - 9	4	5	2	2	3		2
Setting period pause	**Period / Time**	1-9/0-59:59	1 / 10:00		1 / 20:00	1 / 30:00	1 / 20:00		1 / 20:00
			2 / 10:00		2 / 20:00	2 / 30:00	2 / 20:00		2 / 20:00
			3 / 10:00				3 / 20:00		
			4 / 10:00						
	Extra period / Time	0 – (10-Period) /0-59:59	EP1 / 5:00		EP1 / 5:00	EP1 / 5:00	EP1 / 10:00		EP1 / 5:00
			EP2 / 5:00		EP2 / 5:00	EP2 / 5:00	EP2 / 10:00		EP2 / 5:00
	Pause / Time	1-2/0-30:50	P1 / 2:00	P1 / 3:00	P1 / 5:00	P1 / 10:00	P1 / 15:00		P1 / 5:00
			P2 / 15:00	P2 / 10:00	P2 / 10:00	P2 / 5:00	P2 / 10:00		P2 / 10:00
			P3 / 2:00	P3 / 2:00	P3 / 2:00	P3 / 2:00	P3 / 2:00		P3 / 2:00
Count up / Down									
Visual 1/10		☐ ☑	☑		☐	☐	☐		☑
Key +2+3	**Key +2 +3**	☐ ☑	☑	☐	☐	☐	☐		☐
Service	**Service**	☐ ☑		☑					
Shot Clock	**Shot Clock**	☐ ☑	☑		☐	☐			☐
	Value in seconds	0-99	24		0	0			0
	No Stop	☐ ☑	☑		☐	☐			☐
	Link S/S	☐ ☑	☑	☐	☐	☐	☐		☐

Description		*Authorized values*							
Setup Time Out	**Time Out on clock**	☐ ☑	☐	☑	☑	☐	☑		☑
	Number Time Out	0-3	3	2	2	2	1		2
	Sec. Time Out	0 - 99	60	30	60	60	30		60
	Technical Time Out	0 - 99		60					
Team fouls		0 - 9	5						9
Ad. Fouls/Score	**Fouls Score**	☐ ☑	☑	☐	☐	☐	☐		☐
	Fouls	☐ ☑	☑	☐	☐	☐	☐		☐
	Score	☐ ☑	☐	☐	☐	☐	☐		☐
	Player Fouls	0 - 9	5	0	0	0	0		9
	Fouls Time	☐ ☑	☐	☐	☐	☑	☑		☐
	Select expulsion	1-6/0-59:59	1 / 0:00	1 / 0:00	1 / 1:00	1 / 1:00	1 / 1:00		1 / 1:00
			2 / 0:00	2 / 0:00	2 / 2:00	2 / 2:00	2 / 2:00		2 / 2:00
			3 / 0:00+0:00	3 / 0:00+0:00	3 / 2:00+2:00	3 / 2:00+2:00	3 / 2:00+2:00		3 / 2:00+2:00
			4 / 0:00	4 / 0:00	4 / 4:00	4 / 4:00	4 / 4:00		4 / 4:00
			5 / 0:00	5 / 0:00	5 / 5:00	5 / 5:00	5 / 5:00		5 / 5:00
			6 / 0:00	6 / 0:00	6 / 10:00	6 / 10:00	6 / 10:00		6 / 10:00
Horn duration		0 - 20	3		3	3	3		3
Day time		☐ ☑		☐				☑	
Game time		☐ ☑		☐				☑	

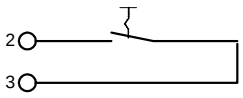
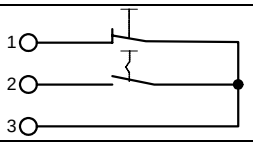
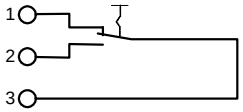
8 CONNECTION OF THE CONSOLE

8.1 Console 3400.627

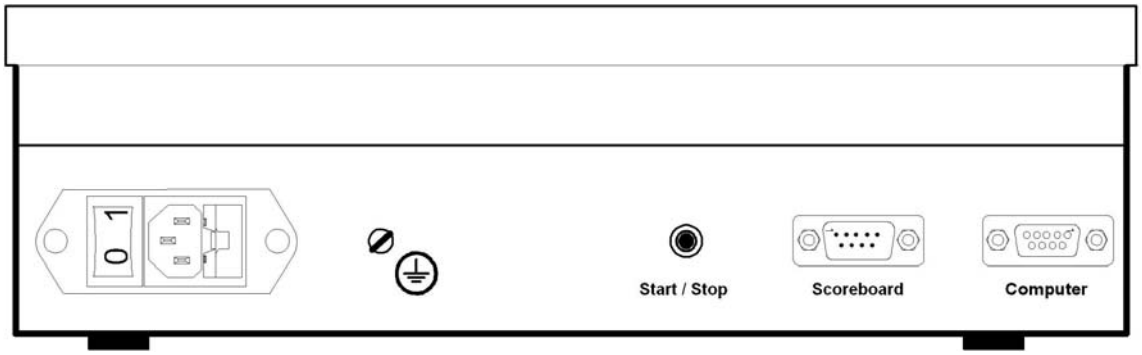


WARNING:

- When the console is equipped with the internal BlueTooth option, TX_1 (pin 1 and 2 of Scoreboard connector) IS NOT AVAILABLE.
- When the "SCB on Bluetooth dis." box is checked (in the "Console set" menu) and no internal Bluetooth exist, the pin 1 and 2 of the Scoreboard connector are input instead of output (TX_1- → RX_1-, TX_1+ → RX_1+).
- It is so recommended to always connect the scoreboards on pin 3 and 4 of the Scoreboard connector.

Connector	*Pin*	*Description*	
Scoreboard (RS485) SCB	**1**	TX_1- (RX_1-)	
	2	TX_1+ (RX_1+)	
	3	TX_2-	
	4	TX_2+	
Computer (RS232) PC	**2**	TX	
	3	RX	
	5	GND	
Start/Stop	**1**	Not used	***START/STOP connector & external RESET***
	2	Start/Stop	
	3	Common	
24 Start/Stop + Reset	**1**	Reset	
	2	Start/Stop	
	3	Common	
Possession	**1**	Home	
	2	Visitors	
	3	Common	

8.2 Console 3400.624



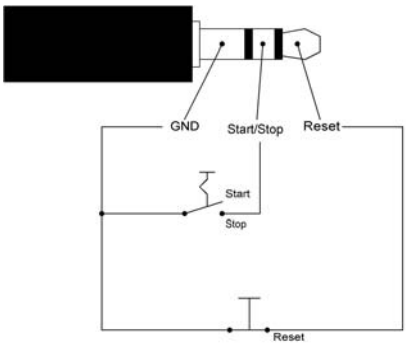
WARNING:

- When the console is equipped with the internal BlueTooth option, TX_1 (pin 1 and 2 of Scoreboard connector) IS NOT AVAILABLE.
- When the "SCB on Bluetooth dis." box is checked (in the "Console set" menu) and no internal Bluetooth exist, the pin 1 and 2 of the Scoreboard connector are input instead of output (TX_1- → RX_1-, TX_1+ → RX_1+).
- It is so recommended to always connect the scoreboards on pin 3 and 4 of the Scoreboard connector.

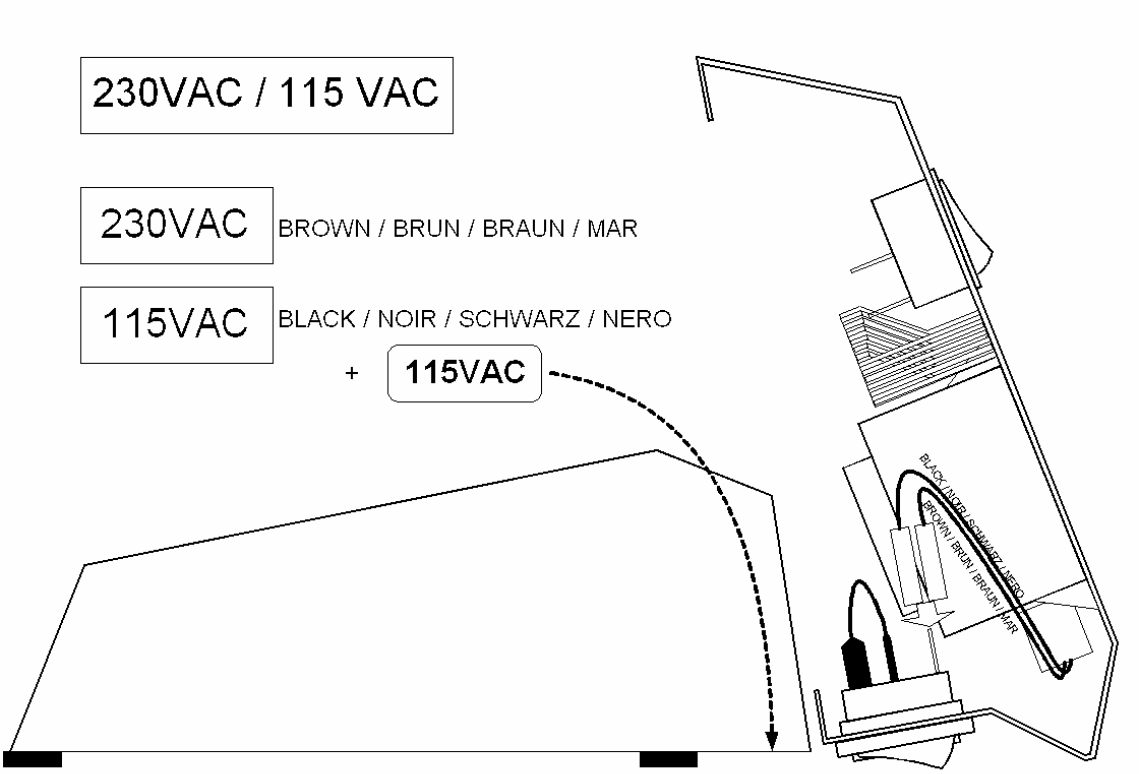
Connector	*Pin*	*Description*
Scoreboard (RS485)	**1**	TX_1- (RX_1-)
	2	TX_1+ (RX_1+)
	3	TX_2-
	4	TX_2+

Computer (RS232)	**2**	TX
	3	RX
	5	GND

START/STOP connector & external RESET



Jack stereo Ø3.5 mm


230VAC / 115 VAC
230VAC
BROWN / BRUN / BRAUN / MAR
115VAC
BLACK / NOIR / SCHWARZ / NERO
+
115VAC
BLACK / NOIR / SCHWARZ / NERO
BROWN / BRUN / BRAUN / MAR

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